

Abstract

An interrogator with an antenna that allows information exchanges with multiple transponders in a shorter distance of communication, by securing an intensified and uniform electromagnetic energy concentrated on areas near antenna elements. The interrogator is furnished with a sleeve antenna that includes a monopole conductor of $1/4$ wavelength (free space wavelength) continuously connected to a core wire of a coaxial cable on one end thereof, and a feed point on the other end, in which the sleeve antenna is grounded at the feed point. The interrogator has a plurality of the transponders arrayed near the antenna, and a plurality of the antennas selected by RF signal selectors. The interrogator antenna allows movable body identification such as in a goods management system for identifying multiply arrayed goods.